

IN THE SPECIFICATIONS

Please substitute in the CROSS REFERENCE TO RELATED APPLICATIONS the following paragraph on page 1:

This invention refers to a transport and deposition device and method to incorporate continuous fibers in a polymer as described in co-pending U.S. Patent application Ser. No. 09/388,052 filed on September 1, 1999, now U.S. Patent No. 6,264,462, issued July 24, 2001.

Please substitute the following paragraph in the BACKGROUND OF THE INVENTION on pages 1-2:

This invention relates to a system including a combined carrier and deposited polymer that move into a forming device to produce an article of a desired shape. The carrier may collect more than one deposit or layer of polymer where an insert such as a rigid foam or honeycomb core is encapsulated by the polymer layers. Additionally, continuous strands of fiber reinforcement may be incorporated in the polymer phase. The carrier, as an example, is a film, foil, fiber construction or other support of a generally planar shape. The carrier provides a decorative surface in the finished shape, outdoor ultra-violet (UV) protection, fire retardency, improved chemical and permeation resistance, improved impact properties or just provides a sacrificial mechanism to move a deposited polymer into a forming device. Although a thermoset can be specified as the deposited polymer, a molten thermoplastic is the preferred choice. A method to deposit polymer onto a carrier in close proximity to one or more forming devices, to minimize heat loss time prior to forming the desired part, is described in my copending U.S. Patent application, Ser. No. 09/388,052, now U.S. Patent No. 6,264,462. The same disclosure describes a method to incorporate continuous fibers in the polymer composition.

Please substitute the following paragraph in the SUMMARY OF THE INVENTION on pages 4-5:

Using a secondary chamber that collects molten polymer from the deposition chamber, continuous fibers, discontinuous fibers or a combination of continuous and discontinuous fibers are fed into a chamber where the fibers are encapsulated by molten polymer under pressure and downward applied motion as described in my copending U.S. Patent application, Ser. No. 09/388,052, now U.S. Patent No. 6,264,462. The combined material is deposited in generally a planar shape on the carrier and moves into the forming device to produce the desired shape.

Please substitute the following paragraph in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT on page 12:

To describe an application that utilizes the combination of a carrier 60, polymer 59 and an insert 57, Fig. 9 is a cut-away view of an automotive fascia and bumper combination where carrier 60 becomes a decorative outer surface. Deposited polymer 59 adheres to the carrier 60 and provides structure. A core material 57 is encapsulated by polymer 59 and acts as a beam. A continuous fiber reinforced polymer 59a makes up the back support of the composite. The process to produce continuous fiber reinforced melt deposits is referenced in my copending U.S. Patent application, Ser. No. 09/388,052, now U.S. Patent No. 6,264,462.

Please substitute the following paragraphs in the DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT on page 14-15:

The polymer transfer and deposition device of Fig. 16 shows the transport device 20 aligned with the top of a polymer collection device 72. As the transport device 20 moves forward to combine with the collection device 72, a hinge 78 is pushed to open a space or chamber 70 where polymer, located in chamber 34, can be deposited into the collection chamber 72 at a controlled rate. A roll or spool of fiber 76 unwinds and moves through an opening 81 located near or on top of the polymer collection device 72.

The set of drivers 80 pull the fibers 76 into the chamber 7270 at a controlled rate. The drivers 80 can move the fiber 76 in a continuous or discontinuous manner. A set of rotating impellers 83 apply inward acting force to the polymer and fibers or fiber mix. Baffles 77 are laterally spaced apart from impellers 83. Once the polymer transport device 20 has delivered a set amount of polymer, it retracts, allowing hinge 78 to close, and returns the transport device to the plasticating machine 10 where more polymer can be deposited into chamber 34. The exit position 75 of the polymer coated fiber is adjustable to control the ratio of polymer to fiber. The exit position 75 opening is controlled by seal 40 attached to one or more pistons 41. Seal 40 has a blade edge that can cut the existing polymer composite to any desired length. The existing polymer composite can be deposited on carrier 60 and moved into a clamping station. Cutters 85 chop fibers to any desirable length. The collection device 72 can be moved on a track system that is similar to the method used to guide the transport devices 18, 20 to the various clamp stations 12 and 14.